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AIR QUALITY BUREAU

GENERAL CONSTRUCTION PERMIT

for

OIL AND GAS FACILITIES

GCP-Oil & Gas

Issued under 20.2.72 NMAC

Acting Director

Juan Carlos (JC) Borrego

Environmental Protection Division Date q1241/8 BUTCH TONGATE CABINET SECRETARY JC  
BORREGO DEPUTY SECRETARY

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## PART A FACILITY SPECIFIC REQUIREMENTS

### A100 Introduction and Applicability

A. Air Quality Permit GCP-Oil and Gas ("Permit") is issued by the Air Quality Bureau (AOB) of the New Mexico Environment Department (Department) under Title 20 Chapter 2 Part 72 of the New Mexico Administrative Code [20.2.72.220 NMAC]. The Department issues general permits in order to register groups of sources that have similar operations, processes, and emissions and that are subject to the same or substantially similar requirements [20.2.72.220.A(1) NMAC]. General permits provide an additional permitting option for specific types of sources that can meet the predetermined permit requirements [20.2.72.220.C(1) NMAC].

B. This Permit authorizes an owner or operator to construct, modify, and operate an oil and gas facility in New Mexico (excluding Bernalillo County, tribal lands, non-attainment areas, and City of Sunland Park) under the conditions set forth herein.

C. An owner or operator that registers for and receives approval to construct under this Permit will have satisfied the State of New Mexico's requirement for obtaining an air quality permit prior to constructing, modifying, or operating a source of air pollutants. However, other federal, state, or local agencies may have additional requirements such as zoning restrictions.

D. All sources for which the Department has approved a Registration Form under GCP-Oil and Gas are subject to GCP-Oil and Gas terms and conditions. No source may construct or operate under GCP-Oil and Gas unless the Department has approved its Registration Form in writing. No source may operate under GCP-Oil and Gas unless such operation meets all the requirements of GCP-Oil and Gas.

E. Construction or modification of a source shall not begin until the Department has approved the Registration Form and the owner or operator has been notified in writing. [20.2.72.200.E NMAC and 20.2.72.220.C(6) (a) NMAC]

F. The Facility shall operate as specified in the Registration Form. The emission limits and equipment specified in the Registration Form are federally enforceable, and shall become the terms and conditions of this Permit.

G. The owner or operator may apply for registration of a Facility under this Permit if:

- (1) The Facility can comply with all of the requirements of this Permit; and
- (2) The Facility includes any combination of the emissions units listed in Table 104.

H. The Department shall deny a Registration Form if:

- (1) The Registration Form is not complete;
- (2) The source, as proposed, is not qualified to register for GCP-Oil and Gas;
- (3) The source, as proposed, includes emission units not allowed under GCP-Oil and Gas;
- (4) The source is, or contains, a petroleum refinery, chemical manufacturing plant, flare pits, or bulk gasoline terminal, or is a listed source in Table 1 of 20.2.74.501 NMAC;
- (5) The source, as proposed, cannot meet the terms and conditions of GCP-Oil and Gas as determined by the review of the Registration Form(s);
- (6) The Facility is located in a nonattainment area [defined by 20.2.72.216 and 20.2.79 NMAC], Bernalillo County, or tribal lands;
- (7) The public notice performed for the Facility is inadequate to meet the requirements in Condition C100.B - Public Notification; or
- (8) Any criteria listed in 20.2.72.208 NMAC is applicable.

A101 Permit Duration (expiration)

A. The term of this permit is permanent unless withdrawn or cancelled by the Department.

A102 Facility: Description

A. The function of the Facility is to treat, process, store and/or transport gases and liquids associated with the production of oil and gas, and/or inject those substances or their byproducts into the earth. [SIC 1311, 1321, 4619, and 4922]

A103 Facility: Applicable Regulations

A. The permittee shall comply with all applicable sections of the requirements listed in Table 103.

Table 103.: Applicable Requirements

Applicable Requirements

Federally

Enforceable

20.2.1 NMAC General Provisions

X

20.2.3 NMAC Ambient Air Quality Standards

X

20.2.7 NMAC Excess Emissions

X

20.2.38 NMAC Hydrocarbon Storage Facilities

20.2.61 NMAC Smoke and Visible Emissions

X

20.2.72 NMAC Construction Permit

X

Applicable Requirements

Federally

Enforceable

20.2.73 NMAC Notice of Intent and Emissions Inventory Requirements

X

20.2.75 NMAC Construction Permit Fees

X

20.2.77 NMAC New Source Performance

X

20.2.82 NMAC MACT Standards for Source Categories of HAPS

X

40 CFR 50 National Ambient Air Quality Standards

X

40 CFR 60, Subpart A, General Provisions

X

40 CFR 60, Subpart D, Da, Db, Dc

X

40 CFR 60, Subpart K, Ka, or Kb

X

40 CFR 60, Subpart GG

X

40 CFR 60, Subpart KKK

X

40 CFR 60, Subpart LLL

X

40 CFR 60, Subpart IIII

X

40 CFR 60, Subpart JJJJ

X

40 CFR 60, Subpart KKKK

X

40 CFR 60, Subpart OOOO

X

40 CFR 60, Subpart OOOOa

X

40 CFR 63, Subpart A, General Provisions

X

40 CFR 63, Subpart HH

X

40 CFR 63, Subpart ZZZZ

X

Additional CAA Regulations Adopted by EIB

X

#### A104 Facility: Regulated Sources

A. Table 104 lists the emission units authorized for this facility. Emission units identified as exempt activities (as defined in 20.2.72.202 NMAC) and/or equipment not regulated pursuant to the Act are authorized, but not included in Table 104.

#### Table 104: Allowable Equipment

Equipment List

Storage Tanks

Flares, Enclosed Combustion Devices, Thermal Oxidizers

Engines, Turbines, and Generators

Dehydrators, Cryogenic Units, Acid Gas Removal, Amine (Sweetening) Units, other Natural Gas Processing Equipment

Auxiliary Equipment and Activities (includes heaters, separators, loading, Vapor Recover Unit (VRU), Vapor Recovery Tower (VRT), Ultra Low Pressure Separator (ULPS), Flash Tower, blowcase vessels, condensers, associated piping and connectors, pneumatics, pumps, compressors and other equipment as approved by the Department).

All units must be evaluated for applicability to NSPS and NESHAP requirements.

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#### A105 Facility: Control Equipment

A. The authorized control equipment is established in the Registration Form. The permittee shall comply with all applicable requirements in this Permit for any control device selected in the Registration Form.

#### A106 Facility: Allowable Emissions

A. The allowable hourly and annual emission limits are established in the Registration Form. In order to qualify for this permit, the Facility's annual emissions may not exceed those amounts in Table 106. These limits ensure the facility will not be a major Title V or PSD source under 20.2.70 or 20.2.74 NMAC.

B. Table 106 does not establish facility emission limits, but establishes the eligibility criteria to register under this permit. If, at any time, these emission rates are exceeded, the applicant shall re-evaluate permit applicability.

#### Table 106: Maximum Eligible Emission Rates to Register Under this Permit

Pollutant

Tons per Year (tpy)

Nitrogen Oxides (NOx)

95 tpy

Carbon Monoxide (CO)

95 tpy

Volatile Organic Compounds (VOC)\* (non-fugitive)

95 tpy

Sulfur Dioxide

95 tpy

Hydrogen Sulfide

25 tpy

Total Suspended Particulates (TSP)

25 tpy

Particulate Matter less than 10 Microns (PM10)

25 tpy

Particulate Matter less than 2.5 Microns (PM2.5)

25 tpy

Any Individual Hazardous Air Pollutant (HAP)

< 10 tpy

Total HAP

< 25 tpy

\* Fugitive emissions of VOC do not typically count toward Title V or PSD applicability. Thus, the total VOC emissions, including fugitive sources, may exceed 100 tpy without triggering additional permitting requirements.

#### C. Allowable Hourly and Annual Emission Limits

Requirement: For each regulated emission unit in the Registration Form, the emissions specified in the Registration Form shall be the allowable emission limits in this Permit. For each piece of equipment with an hourly emission limit established in the Registration Form, compliance shall be demonstrated by complying with the specific conditions for the emission unit in this Permit.

Compliance with the allowable annual emission limits shall be demonstrated by complying with the process parameters required for each piece of authorized equipment (e.g. tank throughput, engine test and/or run time, glycol circulation rates, control device inspection, etc.) as represented in the Registration Form.

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If one of the process parameters required to be monitored has been exceeded, the permittee shall prepare calculations to determine compliance with each applicable emission limit for that piece of equipment. If the permittee determines its emission limit has been exceeded, the permittee shall also determine if that exceedance caused an exceedance of the facility's annual emission limit.

Monitoring: The permittee shall comply with the monitoring requirements as stated in the specific conditions of the permit.

Recordkeeping: Compliance with each annual emission limit shall be demonstrated by complying with the process parameters required for each piece of authorized equipment, except flares. For flares, the permittee shall comply with the requirements in Condition A207.

Compliance with the allowable emission limits for SSM and Malfunction events (non-flaring) shall be demonstrated by complying with Condition A107.

Upon request by the Department, the permittee shall provide calculations of the facility's monthly cumulative total emissions, or the monthly rolling 12-month total emissions in tons per year.

Compliance with the annual emission limits in the Registration Form shall be demonstrated during the first twelve months of operation on a cumulative monthly basis, and after the first twelve months, on a monthly rolling 12-month total basis.

The permittee shall record in accordance with Section B109.

Reporting: The permittee shall report in accordance with Section B110.

A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM) and Malfunction Emissions

A. The allowable SSM and Malfunction emission limits for this facility are established in the Registration Form and were relied upon by the Department to determine compliance with applicable regulations.



B. Conditions for SSM flaring events are established in Condition A207.

C. If selected by the permittee in the Registration Form, the permittee may select to authorize up to 10 tons per year of VOC from malfunction events. If this option is not selected, Condition A107.D does not apply. The Permit does not authorize combustion emissions due to malfunction events.

D. Malfunction Emissions of VOC (Non-combustion Malfunction Emissions)

Requirement: The permittee shall complete the following recordkeeping to demonstrate compliance with malfunction (M) emission limits in the Registration Form.

For emissions due to malfunctions, the permittee has the option to report these as excess emissions of the ton per year limit specified in the Registration Form, in accordance with 20.2.7 NMAC, or include the emissions under the malfunction limit, unless the requested malfunction

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limit has been exceeded.

Excess emissions of the malfunction limits shall be reported in accordance with the requirements at 20.2.7 NMAC as follows:

(1) During the first 12 months of monitoring, if the cumulative monthly total of emissions exceeds the specified allowable annual emission limit.

(2) After the first 12 months of monitoring, if the monthly rolling 12-month total exceeds the specified allowable annual emission limit.

Once emissions from a malfunction event are submitted in the final report per 20.2.7.110.A(2) NMAC, the event is considered an excess emission and cannot be applied toward the malfunction limit in this permit.

Monitoring: The permittee shall monitor all malfunction events that result in VOC emissions including identification of the equipment or activity that is the source of emissions.

Recordkeeping:

(1) To demonstrate compliance, each month records shall be kept of the cumulative total of malfunction VOC emissions during the first 12 months and, thereafter of the monthly rolling 12-month total VOC emissions.

(2) Records shall also be kept of the percent VOC of the gas based on the most recent gas analysis, of the volume of total gas vented in MMscf used to calculate the VOC emissions, and whether the emissions resulting from the event will be used toward the permitted malfunction emission limit or whether the event is reported as excess emissions of the ton per year limit in the Registration Form under 20.2.7 NMAC.

(3) The permittee shall record the demonstrated compliance in accordance with Condition B109, except the requirement in B109.C to record the start and end times of malfunction events shall not apply to the venting of known quantities of VOC.

Reporting: The permittee shall report in accordance with Section B110.

E. SSM Emissions of VOC (Non-combustion SSM)

Requirement: The permittee shall complete the following recordkeeping to demonstrate compliance with routine and predictable startup, shutdown, and maintenance (SSM) emission limits specified in the Registration Form.

Monitoring: The permittee shall monitor the permitted routine and predictable startups, shutdowns, and scheduled maintenance events.

Recordkeeping:

(1) To demonstrate compliance, each month records shall be kept of the cumulative total of SSM VOC emissions during the first 12 months and, thereafter of the monthly rolling 12-month total SSM VOC emissions.

(2) Records shall also be kept of the percent VOC and H<sub>2</sub>S of the gas based on the most recent

gas analysis, and of the volume of total gas vented in MMscf used to calculate the SSM VOC emissions.

(3) The permittee shall maintain records in accordance with Condition B109, except the requirement in B109.C to record the start and end times of SSM events shall not apply to the venting of known quantities of VOC.

Reporting: The permittee shall report in accordance with Section B110.

#### A108 Facility: Allowable Operations

A. This facility is authorized for continuous operation if continuous operation is specified in the Registration Form. Monitoring, recordkeeping, and reporting are not required to demonstrate compliance with continuous hours of operation.

B. If the facility or any emission unit is operated less than 8760 hours per year, the applicant may request a reduced number of hours of operation for the facility or emission unit in the Registration Form. The permittee shall demonstrate compliance with the allowable hours of operation for the facility or emission unit by complying with Condition A108.C.

C. Hours of Operation (For Facility or Emission Units requested in Registration Form to operate less than 8760 hours per year)

Requirement: To ensure compliance with allowable emission limits in the Registration Form, the permittee shall comply with the following requirements.

Monitoring: The permittee shall monitor the hours of operation of each emission unit authorized to operate less than 8760 hours of operation on a monthly rolling 12-month period.

Recordkeeping: The permittee shall record the hours of operation of each such emission unit monthly, shall calculate and record the monthly rolling 12-month total hours of operation, and shall meet the recordkeeping requirements in Section B109.

Reporting: The permittee shall report in accordance with Section B110.

#### A109 Facility: Reporting Schedules

A. The permittee shall report according to the Specific Conditions and General Conditions of this permit.

#### A110 Facility: Fuel and Fuel Sulfur Requirements

A. Fuel and Fuel Sulfur Requirements for Equipment other than Flares

Requirement: Combustion emission units (except flares) may combust only field gas, natural gas, diesel fuel, propane, or other Department-approved fuel. The SO<sub>2</sub> limit for each engine and

turbine is limited by the NO<sub>x</sub> emission rate of the unit. The allowable SO<sub>2</sub> emission limit for engines and turbines is 20% of the NO<sub>x</sub> emission rate of the unit. Diesel fuel must meet ULSD specifications (15 ppm).

Monitoring: None

Recordkeeping: The permittee shall demonstrate compliance with the fuel or fuel oil limit on H<sub>2</sub>S content by maintaining records of a current purchase contract, tariff sheet, or transportation contract for the gaseous or liquid fuel, or fuel gas analysis, specifying the allowable limit or less. If a fuel gas analysis is used, the analysis shall not be older than one year.

Reporting: The permittee shall report in accordance with Section B110.

#### A111 Facility: 20.2.61 NMAC Opacity

A. 20.2.61 NMAC Opacity Limit (All Combustion Units)

Requirement: Visible emissions shall meet the requirements of 20.2.61.109 NMAC.

Monitoring:

(1) Use of natural gas constitutes compliance with 20.2.61 NMAC unless visible emissions are observed. When any visible emissions are observed during operation other than during startup mode, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 9 (EPA Method 9) as required by 20.2.61.114 NMAC, or the operator will be allowed to shut down the equipment to perform maintenance/repair to eliminate the visible emissions. Following completion of equipment maintenance/repair, the operator shall conduct visible emission observations following startup in accordance with the following procedures:

(a) Visible emissions observations shall be conducted over a 10-minute period during operation after completion of startup mode in accordance with the procedures at 40 CFR 60, Appendix A, Reference Method 22 (EPA Method 22). If no visible emissions are observed, no further action is required.

(b) If any visible emissions are observed during completion of the EPA Method 22 observation, subsequent opacity observations shall be conducted over a 10-minute period, in accordance with the procedures at EPA Method 9 as required by 20.2.61.114 NMAC.

For the purposes of this condition, Startup mode is defined as the startup period that is described in the facility's SSM plan.

Recordkeeping:

(1) If any visible emissions observations were conducted, the permittee shall keep records in accordance with the requirements of Section B109 and as follows:

(a) For any visible emissions observations conducted in accordance with EPA Method 22, record the information on the form referenced in EPA Method 22, Section 11.2.

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(b) For any opacity observations conducted in accordance with the requirements of EPA Method 9, record the information on the form referenced in EPA Method 9, Sections 2.2 and 2.4.

Reporting: The permittee shall report in accordance with Section B110.

EQUIPMENT SPECIFIC REQUIREMENTS

OIL AND GAS INDUSTRY

A200 Oil and Gas Industry

A. This section has common equipment related to most oil and gas operations. Only sections specific to operational and control equipment established on the Registration Form apply.

A201 Gas Analysis Requirements

A. Sites with the following equipment shall perform an annual gas analysis to include H2S concentration: Flares, Vents, Enclosed Combustion Devices, Thermal Oxidizers;

B. Sites with the following equipment shall perform an annual extended gas analysis to include H2S: Glycol Dehydrators that vent to the atmosphere, Amine units that vent to the atmosphere;

C. For equipment that uses fuel gas other than natural gas, measure and record the H2S concentration annually; and

D. For all other sites, perform a gas analysis to include H2S concentration at least once every 24-month period.

A202 Engines and Turbines (including generators)

A. The permittee shall comply with the minimum engine and turbine stack parameter requirements of this permit.

B. Maintenance and Repair Monitoring for Engines and Turbines under 180 hp and Located

at Facilities with a PER Greater than 80 tpy of NOx and CO

**Requirement:** Compliance with the allowable emission limits in the Registration Form shall be demonstrated by properly maintaining and repairing the units. Maintenance and repair shall meet the minimum manufacturer's or permittee's recommended maintenance schedule.

**Monitoring:** Activities that involve maintenance, adjustment, replacement, or repair of

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functional components with the potential to affect the operation of an emission unit shall be documented as they occur for any maintenance that takes a unit out of service for more than two hours during any twenty-four hour period.

**Recordkeeping:** The permittee shall maintain records in accordance with Section B109, including records of maintenance and repair activities and a copy of the manufacturer's or permittee's recommended maintenance schedule.

**Reporting:** The permittee shall report in accordance with Section B110.

#### C. Initial Compliance Test (Engines and Turbines > 180 hp)

**Requirement:** Compliance with the allowable emission limits in the Registration Form shall be demonstrated by performing an initial compliance test. Existing units tested within the last five years shall not be required to perform an initial compliance test.

**Monitoring:** The permittee shall perform an initial compliance test in accordance with the General Testing Requirements of Section B111. Emission testing is required for NOx and CO.

Test results that demonstrate compliance with the CO emission limits shall also be considered to demonstrate compliance with the VOC emission limits. Test results that show an exceedance of a CO emission limit are not considered to show an exceedance of a VOC emission limit. The Department may require an initial compliance test to demonstrate compliance with the VOC emission limit.

The monitoring exemptions of Section B108 do not apply to this requirement.

**Recordkeeping:** The permittee shall maintain records in accordance with the applicable Sections in B109, B110, and B111.

**Reporting:** The permittee shall report in accordance with the applicable Sections in B109, B110, and B111.

#### D. Periodic Emissions Testing (Engines and Turbines > 180 hp)

**Requirement:** Compliance with the allowable emission limits in the Registration Form shall be demonstrated by completing periodic emission tests during the monitoring period.

**Monitoring:** The permittee shall test using a portable analyzer or EPA Reference Methods subject to the requirements and limitations of Section B108, General Monitoring Requirements. Emission testing is required for NOx and CO and shall be carried out as described below.

Test results that demonstrate compliance with the CO emission limits shall also be considered to demonstrate compliance with the VOC emission limits. Test results that show an exceedance of a CO emission limit are not considered to show an exceedance of a VOC emission limit. The Department may require a compliance test to demonstrate compliance with the VOC emission limit.

Facilities with a PER less than 80 tpy of each regulated air pollutant shall perform periodic testing every three years for each engine and turbine > 180 hp.

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Facilities with a PER greater than 80 tpy of any regulated air pollutant shall perform periodic testing once per calendar year for each engine and turbine > 180 hp.

For annual testing, the first test shall occur within the twelve months after permit issuance. All subsequent monitoring events for engines and turbines shall occur no

later than one year from the previous event.

For 3-year testing, the first test shall occur within 36 months after permit issuance, and at least once per 36-month period thereafter.

The permittee shall follow the General Testing Procedures of Section B111.

Recordkeeping: The permittee shall maintain records in accordance with Section B109, B110, and B111.

Reporting: The permittee shall report in accordance with Section B109, B110, and B111.

E. 40 CFR 63, Subpart ZZZZ (Engines subject to NESHAP ZZZZ)

Requirement: For units subject to 40 CFR 63, Subpart A and ZZZZ, the permittee shall comply with all applicable requirements of Subpart A and Subpart ZZZZ.

Monitoring: The permittee shall comply with all applicable monitoring requirements of 40 CFR 63, Subpart A and Subpart ZZZZ.

Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements of 40 CFR 63, Subpart A and Subpart ZZZZ.

Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR 63, Subpart A and ZZZZ.

F. 40 CFR 60, Subpart IIII and JJJJ (Engines subject to NSPS IIII and/or JJJJ)

Requirement: For units subject to 40 CFR 60, Subparts A and IIII and/or JJJJ, the permittee shall comply with the notification requirements in Subpart A and the specific requirements of Subpart IIII and/or JJJJ.

Monitoring: The permittee shall comply with all applicable monitoring requirements in 40 CFR 60, Subpart A and IIII and/or JJJJ.

Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements in 40 CFR 60, Subpart A and IIII and/or JJJJ.

Reporting: The permittee shall comply with all applicable reporting requirements in 40 CFR 60, Subpart A and IIII and/or JJJJ.

G. 40 CFR 60, Subpart GG or KKKK (Turbines subject to NSPS GG and/or KKKK)

Requirement: For units subject to 40 CFR 60, Subparts A and GG and/or KKKK, the permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A and GG and/or KKKK.

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Monitoring: The permittee shall comply with all applicable monitoring requirements in 40 CFR 60, Subpart A and GG and/or KKKK.

Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements in 40 CFR 60, Subpart A and GG and/or KKKK.

Reporting: The permittee shall comply with all applicable reporting requirements in 40 CFR 60, Subpart A and GG and/or KKKK.

H. Engine and Turbine Control Device Operation

Requirement: Each unit equipped and operated with an oxidation catalytic converter, non-selective catalytic converter, or other control device specified in the Registration Form, shall comply with the requirements of this condition. Except for recommended burn-in period for catalysts, the units may not be operated in normal service without the control device. Units with a non-selective catalytic (NSCR) converter shall also be equipped with an AFR controlling device, or similar device that performs the same function of maintaining an appropriate air-fuel ratio.

During periods of catalyst maintenance, the permittee shall either (1) shut down the engine or turbine; or (2) replace the catalyst with a functionally equivalent spare to allow the engine or turbine to remain in operation.

The permittee shall maintain the units per the manufacturers supplier's or permittee's

recommended maintenance.

Monitoring: Units equipped with a catalyst shall be operated with a catalyst except during unit burn in periods.

Recordkeeping: The permittee shall maintain records in accordance with Section B109.

Reporting: The permittee shall report in accordance with Section B110.

#### I. Engine and Turbine Stack Parameter Requirements

##### Engine Stack Parameter Requirements

There is no limit on the number of engines that can operate under the GCP-Oil and Gas, provided that each engine has at least the minimum stack parameters determined by the facility total emission rate, and the facility total emission rate remains below the permit limit.

The minimum stack heights for engines are determined by performing the following calculation, and comparing the calculated emission rate with the stack parameters in Table 1:

Step 1) Add up the maximum pound per hour NOx emission rate of all NOx emission sources (except flares and thermal oxidizers). The NOx emission rate from any enclosed combustion device (ECD) must be multiplied by two before adding to the total, as the dispersion from ECD causes twice the impact of other sources.

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Step 2) Use the calculated facility total NOx emission rate in Table 1 to determine the minimum stack parameters for engines.

Step 3) An engine with a temperature or velocity that is less than the minimum that would apply to that unit may choose to add 3.3 feet to the unit's required minimum stack height to be considered to be in compliance with these stack parameter requirements. If both temperature and velocity are low, then 6.6 feet may be added. The minimum temperature and velocity for this exception to apply are

206°F and 26.2 feet per second.

Engines are limited to fuels that produce SO2 emission rates of equal to or less than 20% of the NOx emission rate of that engine.

##### Engines (and Heaters) that do not Meet the Minimum Stack Parameters

Engines (and heaters) that do not meet the minimum stack parameters in Table 1 are authorized if:

1. The minimum height of engine stacks determined in Step 2 above is raised by 3.3 feet, and

2. The applicant adds the pound per hour NOx emission rates from the remaining engines, turbines, and heaters that do not meet the minimum stack parameters after Step 3 above, and those units are able to meet the new minimum stack parameters from Table 1 based on the total emission rate of the remaining engines, turbines, and heaters.

Any number of these engines and heaters are authorized, so long as all of the requirements and facility total emission limits in this condition are met.

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##### Table 1: Engines

Facility total NOx emission rate (lb/hr)

Height (ft)

Temperature (°F)

Velocity (ft/s)

Diameter (ft)

21.7  
23  
854  
91.9  
1.0  
21  
19.7  
854  
91.9  
1.0  
20  
18  
854  
91.9  
1.0  
19  
14.8  
854  
91.9  
1.0  
17 - 18  
14.8  
854  
88.6  
1.0  
15 - 16  
14.8  
854  
88.6  
0.8  
13 - 14  
14.8  
782  
72.2  
0.8  
10 - 12  
14.8  
782  
72.2

0.7  
9  
14.8  
782  
65.6  
0.7  
8  
14.8  
782  
59.1  
0.7  
7  
14.8  
782  
49.2  
0.7  
6  
14.8  
710  
49.2  
0.7  
5  
11.5  
571  
49.2  
0.7  
4  
11.5  
571  
49.2  
0.5  
3  
9.8  
571  
49.2  
0.3  
2  
8.2  
571



49.2

0.3

1

5.9

571

49.2

0.3

#### Turbine Stack Parameter Requirements

There is no limit on the number of turbines that can operate under the GCP-Oil and Gas, provided that each turbine has at least the minimum stack parameters determined by the facility total emission rate, and the facility total emission rate remains below the permit limit.

The minimum stack heights for turbines are determined by performing the following calculation, and comparing the calculated emission rate with the stack parameters in Table 2:

Step 1) Add up the maximum pound per hour NOx emission rate of all NOx emission sources (except flares and thermal oxidizers). The NOx emission rate from any enclosed combustion device (ECD) must be multiplied by two before adding to the total, as the dispersion from ECD causes twice the impact of other sources.

Step 2) Use this facility total NOx emission rate in Table 2 to determine the minimum stack parameters for turbines.

Step 3) A turbine with a temperature or velocity that is less than the minimum that would apply to that unit may choose to add 3.3 feet to the unit's required minimum stack height to be considered to be in compliance with these stack parameter requirements. If both temperature and velocity are low, then 6.6 feet may be added. The minimum temperature and velocity for this exception to apply are 206°F and 26.2 feet per second.

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#### Turbines (and Heaters) that do not Meet the Minimum Stack Parameters

Turbines (and heaters) that do not meet the minimum stack parameters in Table 2 are authorized if:

1. The minimum height of turbine stacks determined in Step 2 above is raised by 3.3 feet, and

2. The applicant adds the pound per hour NOx emission rates from the remaining turbines, engines, and heaters that do not meet the minimum stack parameters after Step 3 above, and those units are able to meet the new minimum stack parameters from Table 2 based on the total emission rate of the remaining turbines, engines, and heaters.

Any number of these turbines and heaters are authorized, so long as all of the requirements and facility total emission limits in this condition are met.

Table 2: Turbines

Facility total NOx emission rate (lb/hr)

Height (ft)

Temperature (°F)

Velocity (ft/s)

Diameter (ft)

21.7

23

598.7  
32.8  
2.3  
21  
19.7  
598.7  
32.8  
2.3  
20  
16.4  
598.7  
32.8  
2.3  
19  
16.4  
598.7  
32.8  
2.0  
17 - 18  
14.8  
598.7  
32.8  
2.0  
14 - 16  
14.8  
598.7  
32.8  
1.6  
12 - 13  
13.1  
598.7  
32.8  
1.6  
9 - 11  
11.5  
598.7  
32.8  
1.6  
8

11.5  
598.7  
32.8  
1.3  
6 - 7  
9.8  
598.7  
32.8  
1.3  
4 - 5  
8.2  
598.7  
32.8  
1.3  
3  
6.6  
598.7  
32.8  
1.1  
2  
5.9  
598.7  
32.8  
0.8  
1  
5.9  
598.7  
32.8  
0.8

#### A203 Heaters and Reboilers

A. Any number of heaters and reboilers are authorized if the units are able to meet the minimum stack parameter requirements in either Table 1 or Table 2 of Condition A202.I.

A heater or reboiler with a temperature or velocity less than the minimum that would apply to that unit in Table 1 or 2 of Condition A202.I may choose to add 3.3 feet to the unit's required minimum stack height to be considered to be in compliance with

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these stack parameter requirements. If both temperature and velocity are low, then 6.6 feet may be added. The minimum temperature and velocity for this exception to apply are 206°F and 26.2 feet per second.

B. If any units do not meet the minimum stack parameters in Table 1 or Table 2 of Condition A202.I, an adjustment may be made using the conditions for Engines or Turbines (and Heaters) that do not Meet the Minimum Stack Parameters requirement in

Condition A202.I of this permit.

C. If, after the above adjustments, any heater or reboiler is unable to meet the minimum stack parameter requirements in Table 1 or 2 of Condition A202.I, the maximum total emission rate allowed for those heaters and reboilers is 1.23 lb/hr of NOX. This limit is based upon the air dispersion modeling used in the development of this permit.

#### A204 Glycol Dehydrators

##### A. Glycol Pump Circulation Rate

**Requirement:** Compliance with the allowable emission limits in the Registration Form shall be demonstrated by monitoring the glycol pump circulation rate for each unit. The permittee shall not exceed the throughput in gallons per minute as requested in the Registration Form.

**Monitoring:** The permittee shall monitor the circulation rate quarterly unless specified as using the maximum design pump rate in the Registration Form. Monitoring shall include a visual inspection of pump rate setting or other method previously approved by the Department.

**Recordkeeping:** The permittee shall maintain records that include a description of the monitoring and are in accordance with Section B109.

**Reporting:** The permittee shall report in accordance with Section B110.

##### B. Extended Gas Analysis and GRI-GLYCalc Calculation

**Requirement:** Compliance with the allowable emission limits in the Registration Form shall be demonstrated by conducting an annual extended gas analysis on the dehydrator inlet gas and by calculating emissions using GRI-GLYCalc or Department-approved equivalent.

**Monitoring:** The permittee shall conduct an annual GRI-GlyCalc analysis using the most recent extended gas analysis, and verify the input data. The permittee may use a method of calculating dehydrator emissions other than the most current version of GRI-GlyCalc if approved by the Department. Changes in the calculated emissions due solely to a change in the calculation methodology shall not be deemed an exceedance of an emission limit.

**Recordkeeping:** The permittee shall identify in a summary table all parameters that were used as inputs in the GRI-GLYCalc or equivalent software model. A printout of calculation inputs will suffice as the summary table. The permittee shall keep a record of the results, noting the VOC and HAP emission rates for the dehydrator obtained from estimates using GRI-GLYCalc or equivalent.

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**Reporting:** The permittee shall report in accordance with Section B110.

##### C. Control Device Inspection

**Requirement:** To demonstrate compliance with the allowable emission limits in the Registration Form, the permittee shall control the still vent and/or flash tank emissions as indicated in the Registration Form. If no control device is selected, the permit shall demonstrate compliance with Conditions A204.A and B.

The permittee shall comply with Requirement 1 below, and the control device requirement in Requirement 2 below, for control devices selected in the Registration Form:

1) At no time during normal operations shall any emissions from the still vent, condenser, or flash tank be vented to the atmosphere, if controlled.

**Control Options (selected in Registration Form):**

2) Still vent, condenser, and/or flash tank emissions shall be captured and routed at all times to the selected control or recovery device.

a) If sending still vent, BTEX condenser, or flash tank emissions to a combustion device, the control device must be in operation at all times the dehydrator is in operation.

b) If still vent, BTEX condenser, or flash tank emissions are being recovered, those emissions shall at all times be routed to a process point that allows the off-gas to be recycled and recompressed, and not vented to the atmosphere.

c) Any closed loop system shall be designed and operated so that there are no detectable emissions.

d) If using a vapor recovery unit (VRU), the still vent and/or flash tank emissions shall be routed to the VRU and re-injected into the process stream. The VRU shall consist of a closed loop system of seals, ducts, and compressor. The VRU shall be operational at all times the glycol dehydrator is in operation.

e) All control devices and VRU shall be installed, operated, and maintained according to manufacturer's or supplier's or permittee's specifications. The permittee shall develop and implement an annual maintenance program or maintenance checklist for each control device and VRU.

f) Or other written Department approved method.

**Monitoring:** The permittee shall inspect the glycol dehydrator, the piping to any capture or control equipment, and any capture and control equipment semi-annually to ensure it is operating as designed.

**Recordkeeping:** The permittee shall record the inspection, the name of the inspector, and the results of all equipment and control device inspections chronologically, noting any maintenance or repairs needed to bring the dehydrator into compliance. The permittee shall maintain a copy of the control device and VRU maintenance recommendations, and the annual maintenance program or checklist.

**Reporting:** The permittee shall report in accordance with Section B110.

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D. 40 CFR 63, Subpart HH

**Requirement:** For units subject to 40 CFR 63, Subpart HH, the permittee shall comply with all applicable requirements.

**Monitoring:** The permittee shall comply with the monitoring requirements of 40 CFR 63.773.

**Recordkeeping:** The permittee shall comply with the recordkeeping requirements of 40 CFR 63.774 and in Section B109.

**Reporting:** The permittee shall comply with the applicable reporting requirements of 40 CFR 63.775 and in Section B110.

A205 Tanks

A. Tank Throughput and Separator Pressure

**Requirement:** Compliance with the allowable emission limits in the Registration Form shall be demonstrated by limiting the hydrocarbon liquid throughput and average separator pressure to the amount and pressure (psia or psig) as listed in the Registration Form.

If tank emissions are controlled by a closed vent system and routed back to facility inlet, then the separator pressure limit shall not apply.

**Monitoring:** The permittee shall monitor the monthly total throughput of any hydrocarbon liquid, and the upstream separator pressure once per month. The upstream separator pressure shall be measured at the separator or flashing vessel directly prior to the crude oil or condensate entering the tanks.

**Recordkeeping:** The permittee shall record the monthly total throughput of hydrocarbon liquids and the monthly separator pressure.

Each month the permittee shall use these values to calculate and record:

1) during the first 12 months of monitoring, the cumulative total hydrocarbon liquid throughput and after the first 12 months of monitoring, the monthly rolling 12-month total hydrocarbon liquid throughput, and

2) during the first 12 months of monitoring, the average separator pressure, and after the first 12 months of monitoring, the monthly rolling 12-month average separator pressure.

Emission rates computed using the same parameters, but with a different Department-approved calculation methodology that exceed these values will not be deemed non-compliance with this permit.

Records shall specify the unit of pressure (psia or psig) and shall be consistent with the representation in the Registration Form. Records shall be maintained in accordance with Section B109.

Reporting: The permittee shall report in accordance with Section B110.

#### B. Control Device Options, Requirements, and Inspections for Tanks

Requirement: The permittee shall demonstrate compliance with the allowable emission limits in the Registration Form by:

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1) limiting the throughput and average separator pressure to the amount listed in the Registration Form; and/or,

2) operating a Department approved control device; and/or,

3) routing emissions to process.

In the case of #2 and #3 above, compliance with the allowable emission limits in the Registration Form shall be demonstrated by operating the control device and/or vapor recovery units as a closed vent system that captures and routes all emissions from tanks back to the process stream or to the control device, and does not vent to the atmosphere. The requested control device is selected in the Registration Form. The permittee may elect to control emissions from any storage vessel in the Registration Form.

Monitoring: At least once per month, the permittee shall inspect the piping from the tanks to vapor recovery unit or control device for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the event that a leak or defect is detected, the permittee shall repair the leak or defect within 30 calendar days and in a manner that minimizes VOC and HAP emissions to the atmosphere.

Alternatively to the above, and if selected in the Registration Form, the Permittee may implement a program that meets the requirements of NSPS OOOOa (40 CFR 60.5416a).

Recordkeeping: The permittee shall record the results of the control device and/or vapor recovery unit inspections chronologically, the name of the inspector, noting any maintenance or repairs that are required.

Reporting: The permittee shall report in accordance with Section B110.

#### A206 Truck Loading

##### A. Truck Loading

Requirement: Compliance with the allowable emission limits in the Registration Form shall be demonstrated by limiting the total annual loadout volume to the monthly rolling 12-month total volume as requested in the Registration Form.

Monitoring: The permittee shall monitor the truck loadout volume on a monthly basis.

Recordkeeping: The permittee shall record the monthly truck loadout volume. Each month, during the first 12 months of monitoring, the permittee shall record the cumulative condensate or crude oil loadout volume, and after the first 12 months of monitoring, the permittee shall calculate and record a monthly rolling 12-month total loadout volume.

Records shall also be maintained in accordance with Section B109.

Reporting: The permittee shall report in accordance with Section B110.

## B. Truck Loading Control Device Inspection

**Requirement:** If selected in the Registration Form, all emissions from truck loading shall be captured and routed to the selected control device and shall not vent to atmosphere. Compliance

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with the allowable emission limits in the Registration Form shall be demonstrated by operating the control device as a closed vent system that captures and routes all emissions from loading to the control device, and by complying with the specific conditions in this permit for that control device.

**Monitoring:** At least once per month, the permittee shall inspect the piping from the loading rack to the control device for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the event that a leak or defect is detected, the permittee shall repair the leak or defect within 30 calendar days and in a manner that minimizes emissions to the atmosphere.

Alternatively to the above monitoring requirement, and if selected in the Registration Form, the Permittee may implement a program that meets the requirements of NSPS 0000a (40 CFR 60.5416a).

**Recordkeeping:** The permittee shall record the results of the control device inspections chronologically, noting any maintenance or repairs that are required.

**Reporting:** The permittee shall report in accordance with Section B110.

## C. Vapor Balancing During Truck Loading

**Requirement:** If selected in the Registration Form, the permittee shall comply with the following requirements. Compliance with the allowable emission limits in the Registration Form shall be demonstrated by operating a vapor balancing system in accordance with the following:

- 1) install and operate the vapor collection and return equipment to collect vapors during loading of tank compartments of outbound transport trucks, and return these vapors to the stationary storage vessels,
- 2) implement signage and written operating procedures requiring vapor collection equipment,
- 3) operate all recovery equipment at a back pressure less than the pressure relief valve setting of transport vehicles, and
- 4) inspect thief hatch seals semi-annually for proper operation and integrity and replace as necessary.

**Monitoring:** Semi-annually, inspect the vapor balance system, hoses, thief hatch seals, and PRD, and include an indication of condition, description of any maintenance, and repairs required.

Alternatively to the above, and if selected in the Registration Form, the Permittee may implement a program that meets the requirements of NSPS 0000a (40 CFR 60.5416a).

**Recordkeeping:** The permittee shall record the date of the inspection, the results of the above inspections chronologically, and note any maintenance or repairs that are required.

**Reporting:** The permittee shall report in accordance with Section B110.

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## A207 Flares

A. This permit does not authorize flaring of gas with a H<sub>2</sub>S content greater than 6 mole percent by volume (pre-combustion). This condition is based upon the air dispersion modeling analysis for this permit.

## B. Pilot Flame, Visible Emissions, and Operational Requirements

Requirement: Compliance with the allowable emission limits for flare(s) in the Registration Form shall be demonstrated by the following:

- 1) The flare is limited to the daily and annual throughput, H<sub>2</sub>S concentration, and hours of operation, as specified in the Registration Form.
- 2) The flare shall combust only gas streams represented in the Registration Form.
- 3) The flare shall be equipped with a continuous pilot flame or an auto-igniter, or require manual ignition.
- 4) For flares with a continuous pilot flame or an auto-igniter, the flare shall be equipped with a system to ensure that the flare is operated with a flame present at all times that gas is sent the flare.
- 5) For flares with manual ignition, the permittee shall inspect and ensure that a flame is present upon initiating each flaring event.
- 6) The flare shall combust gas at all times gas is sent to the flare.
- 7) The flare shall be installed, operated, and maintained according to manufacturer's or equivalent specifications.
- 8) The flare shall be operated with no visible emissions except for periods not to exceed a total of sixty (60) seconds during any fifteen (15) consecutive minutes.
- 9) Compliance with the allowable hourly and annual emission limits in the Registration Form shall be demonstrated by complying with the requirements of this condition.

Malfunction flaring is not authorized under this permit, but is required to be reported under 20.2.7 NMAC. For each malfunction flaring event, the permittee is required to comply with the flow meter requirements in this condition. This information will be used to calculate emissions reported under 20.2.7 NMAC.

Monitoring:

- 1) For flares with a continuous pilot or an auto igniter, the permittee shall continuously monitor the presence of a flare pilot flame using a thermocouple equipped with a continuous recorder and alarm, to detect the presence of a flame, or any other equivalent device approved by the Department.
- 2) For manually ignited flares, the permittee shall monitor the presence of a flame using visual observation during each flaring event.

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- 3) When any visible emissions are observed, the permittee shall perform a Method 22 observation while the flare pilot flame is present to certify compliance with the visible emission requirements. The observation shall be a minimum of fifteen minutes.
- 4) For flaring of the following event types, the permittee shall monitor in accordance with the following:

For startup, shutdown, maintenance, and emergency flaring at high pressure, a gas flow meter and flow totalizer, equipped with a chart recorder or data logger (electronic storage), shall be installed in the flare line to measure and record the total standard cubic feet (scf) of gas sent to the flare during any flaring event.

Monitoring for low pressure flaring is satisfied by the parametric monitoring of the equipment controlled by the flare.

- 5) The permittee shall measure the H<sub>2</sub>S content, VOC content, and the heating value (Btu/scf) of the gas sent to the flare for combustion with a gas analysis in accordance with Condition A201.
- 6) For all high pressure flares, the flow meter, totalizer, and if used, the inline monitor shall be operated, calibrated, and maintained as specified by the manufacturer, permittee, or equivalent and as necessary to ensure correct and accurate readings.

Recordkeeping: The permittee shall record:

- 1) Chronologically, all instances of alarm activation, including the date and cause of alarm activation, actions taken to bring the flare into normal operating conditions,



the name of the personnel conducting the inspection, and maintenance activities.

2) The results of the Method 22 observations and flame inspection for manual flares.

3) The results of the gas analysis including H<sub>2</sub>S, VOC content, and heating value.

4) Both the hourly and monthly flow meter and flow totalizer measurements of gas sent to the flare during each flaring event.

5) Monthly, based on the data monitored and recorded in this condition and the throughput of the gas streams sent to any high pressure flare, the calculations and the basis of the calculations of the maximum hourly emission rate and the monthly total emissions in tons per month.

6) If the maximum hourly emission rate calculated in requirement 5 above, exceeds the allowable hourly emission limit, calculate and record the hourly emission rate for each hour of each flaring event of that month.

7) If one of the process parameters for a controlled unit has been exceeded, calculate and record the hourly and annual emission calculations for low and high pressure flares, to determine compliance with each applicable emission limit for that piece of equipment.

Reporting: The permittee shall report in accordance with Section B110 and in accordance with 20.2.7 NMAC.

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#### C. Flare Stack Parameter Requirements

The facility can have any number of flares, provided that each flare has at least the minimum stack parameters determined by the SO<sub>2</sub> emission rate, and so long as the facility total emission rate remains below the permit limit. Flares that burn pipeline quality natural gas need to be designed for at least the flow rate they are burning, but have no specified height in this permit. Flares that are not limited to pipeline quality natural gas have height restrictions listed in the following table.

Table 3: Flare Minimum Stack Height Requirements

SO<sub>2</sub> Emission Rate

Height

(lb/hr)

(ft)

4501 - 5000

59.1

4001 - 4500

52.5

3501 - 4000

45.9

3001 - 3500

39.4

2501 - 3000

29.5

20 - 2500

19.7

10 - 19

13.1

5 - 9

11.5

3 - 4

9.8

2

8.2

0 - 1

6.6

Flare gas shall contain no higher than 6% H<sub>2</sub>S by volume (pre-combustion). If flare gas contains more than 6% H<sub>2</sub>S by volume, then assist gas may be added to reduce the gas composition to 6% H<sub>2</sub>S or less by volume.

A208 Enclosed Combustion Device (ECD) or Thermal Oxidizer (TO)

A. ECD are not permitted to burn gas with high sulfur content. The SO<sub>2</sub> emission limit for ECD is 0.9 lb/hr if all ECD operate with a velocity of at least two (2) feet per second. The SO<sub>2</sub> limit for ECD is 0.7 lb/hr if all ECD operate with a velocity of at least one (1) foot per second. This limit is based upon the air dispersion modeling used in the development of this permit.

B. Pilot Flame, Visible Emissions, and Operational Requirements

Requirement: Compliance with the allowable emission limits for each ECD(s) and TO(s) in the Registration Form shall be demonstrated by the following:

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- 1) The permittee shall at all times operate the ECD or TO as a closed vent system that captures and routes all VOC and HAP emissions from the units listed in the Registration Form to the control device.
- 2) The permittee shall ensure that the controlled units do not vent uncombusted gas to the atmosphere.
- 3) Each ECD and TO is limited to the daily and annual throughput, H<sub>2</sub>S concentration, and hours of operation as requested in the Registration Form.
- 4) The units shall be equipped with a continuous pilot flame or an auto-igniter.
- 5) The units shall be equipped with a system to ensure that it is operated with a flame present at all times that gas is sent the unit.
- 6) ECD and TO combustion shall be maintained for the duration of time gas is sent to the unit.
- 7) ECD and TO shall be installed, operated, and maintained according to manufacturer's, or permittee's equivalent specifications.
- 8) The ECD and TO shall be operated with no visible emissions except for periods not to exceed a total of sixty (60) seconds during any fifteen (15) consecutive minutes.

Monitoring:

- 1) The permittee shall continuously monitor the presence of a pilot flame using a thermocouple equipped with a continuous recorder and alarm, to detect the presence of a flame, or any other equivalent device approved by the Department.
- 2) Once per calendar year, or when any visible emissions are observed, the permittee shall perform a Method 22 observation while the pilot flame is present to certify compliance with the visible emission requirements. The observation period shall be fifteen minutes.
- 3) A gas flow meter and flow totalizer, equipped with a chart recorder or data logger (electronic storage), shall be installed in the incoming gas line to measure and record the total standard cubic feet (scf) of gas sent to the unit during any high pressure

operation.

4) Monitoring of low pressure combustion by the ECD or TO is satisfied by the parametric monitoring of the equipment controlled by the ECD or TO.

5) The permittee shall measure the H<sub>2</sub>S content, VOC content, and the heating value (Btu/scf) of the gas sent for combustion with a gas analysis in accordance with Condition A201.

6) The flow meter, totalizer, and if used, the inline monitor, shall be operated, calibrated, and maintained as specified by the manufacturer, or permittee, or equivalent and as necessary to ensure correct and accurate readings.

Recordkeeping: The permittee shall record:

1) Chronologically, all instances of alarm activation, including the date and cause of alarm activation, actions taken to bring the unit into normal operating conditions, and maintenance activities,

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2) The results of the Method 22 observations,

3) The results of the gas analyses including H<sub>2</sub>S, VOC content, and heating value,

4) For high pressure units, both the hourly and monthly flow meter and flow totalizer measurements of gas sent to the unit, and

5) Calculations if one of the process parameters has been exceeded to determine compliance with each applicable emission limit for that piece of equipment.

Reporting: The permittee shall report in accordance with Section B110.

A209 Vapor Recovery Units, Vapor Recovery Towers, and Ultra Low-Pressure Separators

A. Vapor Recovery Unit or Department-approved Equivalent

Requirement: Compliance with the allowable emission limits for any of these units in the Registration Form shall be demonstrated by the following:

1) The permittee shall at all times operate the vapor recovery unit (VRU) as a closed vent system that captures and routes all VOC and HAP emissions from units listed in the Registration Form back to the process stream or to a sales pipeline, and does not vent to the atmosphere.

2) The permittee may select in the Registration Form a backup control device or redundant VRU to control emissions during SSM or VRU downtime.

Monitoring At least once per month, the permittee shall inspect the VRU and associated piping from the controlled units, and blowcase vessels, for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the event that a leak or defect is detected, the permittee shall repair the leak or defect within 30 calendar days and in a manner that minimizes VOC and HAP emissions to the atmosphere.

Alternatively to the above, and if selected in the Registration Form, the Permittee may implement a program that meets the requirements of NSPS 0000a (40 CFR 60.5416a).

Recordkeeping: The permittee shall record the results of the VRU inspections chronologically, the name of the personnel conducting the inspection, and noting any maintenance or repairs that are required.

Reporting: The permittee shall report in accordance with Section B110.

A210 Amine Unit

A. Amine Unit Throughput and Amine Circulation Rate

Requirement: To demonstrate compliance with the allowable emission limits in the Registration Form, the inlet stream shall not exceed the amount represented in the Registration Form, and the amine pump circulation rate shall not exceed the circulation

rate requested (in gallons per minute) in the Registration Form.

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The permittee shall install, calibrate, and maintain a flow meter that measures the flow rate into the contactor. A flow meter is not required if the permitted capacity of the unit, and the emission calculations as represented in the Registration Form, is equal to and based upon the unit's maximum capacity.

Monitoring: The permittee shall:

- 1) calibrate the flow meter semi-annually in accordance with the manufacturer's, permittee's, or equivalent recommended schedule. The calibration shall be in accordance with the specifications at 40 CFR 98, and
- 2) monitor the flow rate daily (in units of MMscf/day) and monitor the circulation rate monthly.

Recordkeeping: The permittee shall keep records in accordance with Section B109, and of the following:

- 1) flow meter calibration results,
- 2) daily total of natural gas or NGL throughput each day in units of MMscf/day or barrels/day,
- 3) the pump flow rate in gpm and the basis for determination of flow rate, and
- 4) the manufacturer's specification sheet indicating the maximum flow rate of the pump.

Reporting: The permittee shall report in accordance with Section B110.

#### B. Amine Unit Control Device Inspection

Requirement: The permittee shall select the amine unit control device, if any, in the Registration Form. To demonstrate compliance with the allowable emission limits in the Registration Form, the permittee shall ensure a controlled amine sweetening unit is a closed system where all still vent emissions and flash tank emissions are collected and routed at all times back into the process point, and not vented to the atmosphere, or routed to a control device.

Monitoring: The permittee shall inspect the amine treatment unit, piping, and, if selected, the control equipment semi-annually to ensure it is operating as designed.

Alternatively to the above, and if selected in the Registration Form, the Permittee may implement a program that meets the requirements of NSPS OOOOa (40 CFR 60.5416a).

Recordkeeping: The permittee shall record the date, the name of the personnel conducting the inspection, and the results of all equipment and control device inspections chronologically, noting any maintenance or repairs needed to bring the amine treatment unit into compliance. The permittee shall maintain a copy of the manufacturer's, permittees, or equivalent maintenance recommendations.

Reporting: The permittee shall report in accordance with Section B110.

#### A211 NSPS KKK, OOOO, OOOOa, and Fugitives

A. 40 CFR 60, Subpart KKK (Equipment and Compressors at Onshore Natural Gas Processing Plants subject to NSPS KKK)

Requirement: Equipment and compressors in VOC or in wet gas service (as defined in 40 CFR §60.631) within process unit(s) are subject to Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants, 40 CFR 60, Subpart KKK. The permittee

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shall comply with all applicable requirements in Subparts A and KKK.

Monitoring: The permittee shall implement a leak detection and repair program and shall comply with the standards as specified at 40 CFR §60.632 except as provided in §60.633.

Recordkeeping: The permittee shall comply with the recordkeeping requirements specified at 40 CFR §60.486 except as provided in §§60.633 and 60.635.

Reporting: The permittee shall comply with the reporting requirements specified at 40 CFR §60.487 except as provided in §§60.633 and 60.636.

B. 40 CFR 60, Subpart OOOO and/or OOOOa

Requirement: For units subject to 40 CFR 60, Subpart OOOO and/or OOOOa, the permittee shall comply with all applicable requirements in Subpart A and Subpart OOOO and/or OOOOa.

Monitoring: The permittee shall comply with all applicable monitoring requirements of these subparts. Where applicable, this requirement satisfies the monitoring inspection conditions of this GCP.

Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements of these subparts.

Reporting: The permittee shall comply with all applicable reporting requirements of these subparts.

A212 Setbacks and Other Requirements for Facilities Registering under this Permit

Haul road emissions:

Haul road emissions do not have additional requirements in this permit.

Fugitive H2S emissions from truck loading, tank venting, and leaks:

The Department has established screening thresholds for fugitive H2S monitoring. The applicant may either (1) comply with Condition A212.A below, or (2) calculate and provide in the Registration Form the potential emission rate of fugitive H2S. If the emission rate is equal to or lower than the screening thresholds, the fugitive emission monitoring in Condition A212.A below is not required.

The screening thresholds are:

- 1) 0.01 lb/hr for all areas except the Pecos Permian Basin.
- 2) 0.1 lb/hr for the Pecos Permian Basin.

If a facility is above the screening thresholds, the following condition applies:

A. Fugitive Emission Monitoring for Facilities Receiving or Processing Sour Gas

Requirement: Facilities registered under this permit that are receiving or processing sour gas (greater than 4 ppm of H2S in all areas except the Pecos Permian Basin and greater than 24 ppm

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of H2S in the Pecos Permian Basin) are required to conduct routine fugitive emission leak detection monitoring of each process equipment and control device that contacts the sour gas stream.

Monitoring: At least once per month, the permittee shall conduct a leak detection and repair program (LDAR) utilizing instrumentation and/or audio, visual and olfactory (AVO) inspection for all process equipment and control devices that are in contact with sour gas. The detection program shall include inspecting the piping from process equipment to any control device. Defects include, but are not limited to, visible cracks, holes, or gaps; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the event that a leak or defect is detected, the permittee shall repair the leak or defect within 30 calendar days and in a manner that minimizes emissions to the atmosphere. If the repair of the fugitive leak requires a unit shutdown, the repair may be delayed until the next scheduled shutdown. If a repair cannot be completed within 30 calendar days, the equipment shall be documented and tracked through completion of repair.

Recordkeeping: The permittee shall record the results of the LDAR inspections chronologically, noting any maintenance or repairs that are required and, if

applicable, the reason describing why maintenance or repairs were not completed within 30 calendar days.

Reporting: The permittee shall report in accordance with Section B110.

Terrain:

Equipment shall be at least 100 meters from any stack to terrain that is five (5) or more meters above the top of a stack.

Nearby facilities:

The facility must be at least 150 meters from any source that emits over 25 tons/year of NOx.

Class I areas:

The facility must be at least (three) 3 miles from any Class I area.

## PART B GENERAL CONDITIONS

### B100 Introduction

A. The Department has determined that all facilities registered under and operating in accordance with this permit will meet all applicable requirements under the federal Clean Air Act, the New Mexico Air Quality Control Act, and Title 20, Chapter 2 NMAC, including 20.2.74 NMAC (Prevention of Significant Deterioration), 20.2.77 NMAC (New Source Performance Standards), 20.2.78 (Emission Standards for Hazardous Air Pollutants), 20.2.82 NMAC (Maximum Achievable Control Technology Standards for Source Categories of Hazardous Air Pollutants), and will not cause or contribute to air contaminant levels in excess of any national or New Mexico ambient air quality standard.

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B. Where the permit refers to "Department approved" or "approved by the Department," means for the purposes of this permit to have been approved in writing by the Department. Guidance published on the AQB website meets this requirement.

### B101 Legal

A. The permittee shall construct or modify and operate the Facility in accordance with all of the conditions of the permit, including the representations in the Registration Form. 20.2.72.210.D NMAC, states that any term or condition imposed by the Department on a permit is enforceable to the same extent as a regulation of the Environmental Improvement Board.

B. Unless otherwise specified in Part A or Part C of this permit, any future physical changes, changes in the method of operation, or changes in the authorized area may constitute a modification as defined by 20.2.72 NMAC, Construction Permits. Unless the source or activity is exempt under 20.2.72.202 NMAC, no modification shall begin prior to written approval of a Registration Form. (20.2.72.200.A.2 and E, and 210.B.4 NMAC)

C. Registrations which require notification under Condition C101.A or Condition C101.B for permit revisions and modifications shall be submitted to:

Permit Programs Manager

New Mexico Environment Department

Air Quality Bureau

525 Camino de los Marquez, Suite 1

Santa Fe, New Mexico 87505-1816

D. The GCP-Oil and Gas supersedes GCP-1 and GCP-4 permits issued by the Department. For permittees operating under an existing GCP-1 or GCP-4, the Department will provide a transition schedule for converting to operate under the GCP-Oil and Gas, or for obtaining a regular Part 72 permit.

Within nine (9) months of issuance of this GCP-Oil and Gas, each permittee operating under an existing GCP-1 or GCP-4 shall determine if each facility qualifies to operate

under the GCP-Oil and Gas, or if the permittee must obtain a regular Part 72 permit for that facility, and for each existing facility, the permittee shall provide notification to the Department of one of the following:

- 1) The facility qualifies to operate under the GCP-Oil and Gas, and the date that the permittee commenced operating under the GCP-Oil and Gas, or
- 2) The facility does not qualify to operate under the GCP-Oil and Gas, and the permittee shall obtain a regular Part 72 permit.

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The Department shall establish a transition schedule for each existing facility and shall require the permittee to either (1) submit a Registration Form to operate under the GCP-Oil and Gas, or (2) to submit a regular Part 72 permit application. There is no public notice or fees required for transitioning an existing facility operating under a GCP-1 or GCP-4 permit under the GCP-Oil and Gas. Public notice and fees do apply to facilities applying for a regular Part 72 permit.

E. On an as needed basis, the Department may revise the Registration Form and Air Emission Calculation Tool in order to make necessary revisions, improvements, and updates to the Forms.

#### B102 Authority

A. This permit is issued pursuant to the Air Quality Control Act (Act) and regulations adopted pursuant to the Act including Title 20, Chapter 2, Part 72 of the New Mexico Administrative Code (NMAC), (20.2.72 NMAC), Construction Permits, including 20.2.72.220, General Permits, and is enforceable pursuant to the Act and the air quality control regulations applicable to this source.

B. The Secretary of the Department is the Administrator for 40 CFR Parts 60, 61, and 63 pursuant to the delegation and exceptions of Section 10 of 20.2.77 NMAC (NSPS), 20.2.78 NMAC (NESHAP), and 20.2.82 NMAC (MACT).

#### B103 Fees

A. Each Registration Form shall include a certified check or money order for 10 fee points. The current fee is available on the Permitting website.

B. The Department will assess an annual fee for this Facility. The current annual fee amount is available by contacting the Department or can be found on the Department's website. The AQB will invoice the permittee for the annual fee amount at the beginning of each calendar year. This fee does not apply to facilities which are assessed an annual fee in accordance with 20.2.71 NMAC. For facilities that satisfy the definition of "small business" in 20.2.75.7.F NMAC, this annual fee will be divided by two. (20.2.75.11 NMAC)

C. All fees shall be remitted in the form of a corporate check, certified check, or money order, or other Department approved method, and made payable to the "NM Environment Department, AQB."

#### B104 Appeal Procedures

A. Any person who participated in a permitting action before the Department and who is adversely affected by such permitting action, may file a petition for hearing before the

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Environmental Improvement Board. The petition shall be made in writing to the Environmental Improvement Board within thirty (30) days from the date notice is given of the Department's action and shall specify the portions of the permitting action to which the petitioner objects, certify that a copy of the petition has been mailed or hand-delivered and attach a copy of the permitting action for which review is sought. Unless a timely request for hearing is made, the decision of the Department shall be final. The petition shall be copied simultaneously to the Department upon receipt of the appeal notice. If the petitioner is not the applicant or permittee, the petitioner shall mail or hand-deliver a copy of the petition to the applicant or permittee. The Department shall certify the administrative record to the board. Petitions for a

hearing shall be sent or hand delivered to: (20.2.72.207.F NMAC)

Secretary, New Mexico Environmental Improvement Board

Post Office Box 5469

1190 St. Francis Drive, Runnels Bldg. Rm. N2153

Santa Fe, New Mexico 87502-5469

#### B105 Submittal of Reports and Certifications

A. Stack Test Protocols and Stack Test Reports shall be submitted electronically to Stacktest.AQB@state.nm.us.

B. Excess Emission Reports shall be submitted electronically to eereports.aqb@state.nm.us. (20.2.7.110 NMAC)

#### B106 NSPS and/or MACT General Conditions

A. If a facility is subject to a NSPS standard in 40 CFR 60, the requirements of 40 CFR 60, Subpart A, General Provisions, also apply.

B. If a facility is subject to a MACT standard in 40 CFR 63, the requirements of 40 CFR 63, Subpart A, General Provisions, also apply.

#### B107 Startup, Shutdown, and Maintenance Operations

A. The owner or operator of a source having an excess emission shall comply with 20.2.7 NMAC and, to the extent practicable, operate the source, including associated air pollution control equipment, in a manner consistent with good air pollutant control practices for minimizing emissions. (20.2.7.109 NMAC). The establishment of allowable malfunction emission limits does not supersede this requirement.

B. The establishment of permitted startup, shutdown, and maintenance (SSM) emission limits does not supersede the requirements of 20.2.7.14.A NMAC. Except for operations or equipment subject to Condition B106, the permittee shall establish and

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implement a plan to minimize emissions during routine or predictable start up, shut down, and scheduled maintenance (SSM work practice plan) and shall operate in accordance with the procedures set forth in the plan. (SSM work practice plan) (20.2.7.14.A NMAC)

#### B108 General Monitoring Requirements

A. These requirements do not supersede or relax requirements of federal regulations.

B. The following monitoring requirements shall be used to determine compliance with applicable requirements and emission limits. Any sampling, whether by portable analyzer or EPA reference method, that measures an emission rate over the applicable averaging period greater than an emission limit in the Registration Form constitutes noncompliance with this permit. The Department may require, at its discretion, additional tests pursuant to EPA Reference Methods at any time, including when sampling by portable analyzer measures an emission rate greater than an emission limit in the Registration Form; but such requirement shall not be construed as a determination that the sampling by portable analyzer does not establish noncompliance with this permit and shall not stay enforcement of such noncompliance based on the sampling by portable analyzer.

C. If the emission unit is shutdown at the time when periodic monitoring is due to be accomplished, the permittee is not required to restart the unit for the sole purpose of performing the monitoring. Using electronic or written mail, the permittee shall notify the Air Quality Bureau's Compliance and Enforcement Section of a delay in emission tests prior to the deadline for accomplishing the tests. Upon recommencing operation, the permittee shall submit any pertinent pre-test notification requirements set forth in the current version of the Department's Standard Operating Procedures For Use Of Portable Analyzers in Performance Test, and shall accomplish the monitoring.

D. The requirement for monitoring during any monitoring period is based on the percentage of time that the unit has operated. However, to invoke the monitoring period



exemption at B108.D(2), hours of operation shall be monitored and recorded.

(1) If the emission unit has operated for more than 25% of a monitoring period, then the permittee shall conduct monitoring during that period.

(2) If the emission unit has operated for 25% or less of a monitoring period then the monitoring is not required. After two successive periods without monitoring, the permittee shall conduct monitoring during the next period regardless of the time operated during that period, except that for any monitoring period in which a unit has operated for less than 10% of the monitoring period, the period will not be considered as one of the two successive periods.

(3) If invoking the monitoring period exemption in B108.D(2), the actual operating time of a unit shall not exceed the monitoring period required by this permit before the

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required monitoring is performed. For example, if the monitoring period is annual, the operating hours of the unit shall not exceed 8760 hours before monitoring is conducted. Regardless of the time that a unit actually operates, a minimum of one of each type of monitoring activity shall be conducted during any five-year period.

E. For all periodic monitoring events, except when a federal or state regulation is more stringent, three test runs shall be conducted at 90% or greater of the unit's capacity as stated in the Registration Form, and at additional loads when requested by the Department. If the 90% capacity cannot be achieved, the monitoring will be conducted at the maximum achievable load under prevailing operating conditions except when a federal or state regulation requires more restrictive test conditions. The load and the parameters used to calculate it shall be recorded to document operating conditions and shall be included with the monitoring report.

F. When requested by the Department, the permittee shall provide schedules of testing and monitoring activities.

G. If monitoring is new or is in addition to monitoring imposed by an existing applicable requirement, it shall become effective 120 days after the date of permit issuance. For emission units that have not commenced operation, the associated new or additional monitoring shall not apply until 120 days after the units commence operation.

#### B109 General Recordkeeping Requirements

A. The permittee shall maintain records to assure and verify compliance with the terms and conditions of this permit and any other applicable requirements that become effective after permit issuance. The minimum information to be included in these records is:

Records required for testing and sampling:

- (1) equipment identification (include make, model and serial number for all tested equipment and emission controls)
- (2) date(s) and time(s) of sampling or measurements
- (3) date(s) analyses were performed
- (4) the qualified entity that performed the analyses
- (5) analytical or test methods used
- (6) results of analyses or tests
- (7) operating conditions existing at the time of sampling or measurement

Records required for equipment inspections and/or maintenance required by this permit:

- (1) equipment identification number (including make, model and serial number)
- (2) date(s) and time(s) of inspection, maintenance, and/or repair
- (3) date(s) any subsequent analyses were performed (if applicable)

- (4) name of the person or qualified entity conducting the inspection, maintenance, and/or repair
- (5) copy of the equipment manufacturer's or the owner or operator's maintenance or repair recommendations (if required to demonstrate compliance with a permit condition)
- (6) description of maintenance or repair activities conducted
- (7) all results of any required parameter readings
- (8) a description of the physical condition of the equipment as found during any required inspection
- (9) results of required equipment inspections including a description of any condition which required adjustment to bring the equipment back into compliance and a description of the required adjustments

B. Except as provided in the Specific Conditions, electronic records shall be maintained on-site or if unstaffed, at the permittee's local business office for a minimum of two (2) years from the time of recording and shall be made available to Department personnel upon request.

C. Unless otherwise indicated by Specific Conditions, the permittee shall keep the following records for malfunction emissions and routine or predictable emissions during startup, shutdown, and scheduled maintenance (SSM):

(1) The owner or operator of a source subject to this permit shall establish and implement a plan to minimize emissions during routine or predictable startup, shutdown, and scheduled maintenance through work practice standards and good air pollution control practices. This requirement shall not apply to any affected facility defined in and subject to an emissions standard and an equivalent plan under 40 CFR Part 60 (NSPS), 40 CFR Part 63 (MACT), or an equivalent plan under 20.2.72 NMAC - Construction Permits. The permittee shall keep records of all sources subject to the plan to minimize emissions during routine or predictable SSM and shall record if the source is subject to an alternative plan and therefore, not subject to the plan requirements under 20.2.7.14.A NMAC.

(2) If the facility has allowable SSM emission limits in the Registration Form, the permittee shall record all SSM events, including the date, the start time, the end time, a description of the event, and a description of the cause of the event. This record also shall include a copy of the manufacturer's, or equivalent, documentation showing that any maintenance qualified as scheduled. Scheduled maintenance is an activity that occurs at an established frequency pursuant to a written protocol published by the manufacturer or other reliable source. The authorization of allowable SSM emissions does not supersede any applicable federal or state standard. The most stringent requirement applies.

(3) If the permittee has allowable malfunction emission limits in the Registration Form, the permittee shall record all malfunction events to be applied against these limits. The permittee shall also include the date, the start time, the end time, and a

description of the event. The authorization of allowable malfunction emissions does not supersede any applicable federal or state standard. The most stringent requirement applies.

#### B110 General Reporting Requirements

(20.2.72 NMAC Sections 210 and 212)

A. Records and reports shall be maintained on-site or at the permittee's local business office unless specifically required to be submitted to the Department or EPA by another condition of this permit or by a state or federal regulation.

B. The permittee shall notify the Air Quality Bureau's Compliance and Enforcement Section using the current Submittal Form posted to NMED's Air Quality web site under Compliance and Enforcement/Submittal Forms in writing of, or provide the Department with (20.2.72.212.A and B):

(1) the anticipated date of initial startup of each new or modified source not less than thirty (30) days prior to the date. Notification may occur prior to issuance of the permit, but actual startup shall not occur earlier than the permit issuance date;

(2) after receiving authority to construct, the equipment serial number as provided by the manufacturer or permanently affixed if shop-built and the actual date of initial startup of each new or modified source within fifteen (15) days after the startup date; and

(3) the date when each new or modified emission source reaches the maximum production rate at which it will operate within fifteen (15) days after that date.

C. Unless otherwise specified in Parts A or C of this permit, the permittee shall notify the Bureau's Permitting Program Manager, in writing of, or provide the Department with (20.2.72.212.C and D):

(1) any change of operators or any equipment substitutions within fifteen (15) days of such change;

(2) any necessary update or correction no more than sixty (60) days after the operator knows or should have known of the condition necessitating the update or correction of the permit.

D. Results of emission tests and monitoring for each pollutant (except opacity) shall be reported in pounds per hour (unless otherwise specified) and tons per year. Opacity shall be reported in percent. The number of significant figures corresponding to the full accuracy inherent in the testing instrument or Method test used to obtain the data shall be used to calculate and report test results in accordance with 20.2.1.116.B and C NMAC. Upon request by the Bureau, tabular data shall be submitted in editable, MS Excel format.

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E. The permittee shall submit reports of excess emissions in accordance with 20.2.7.110.A NMAC.

F. Excess Emissions Reporting for Regulated Sources with no Pound per Hour (pph) and/or Ton per Year (tpy) Emission Limits:

(1) Emissions in excess of 1.0 pph or 1.0 tpy for each regulated air pollutant (except for H<sub>2</sub>S).

(2) For H<sub>2</sub>S, emissions in excess of 0.1 pph or 0.44 tpy.

#### B111 General Testing Requirements

##### A. Compliance Tests

(1) Compliance test requirements from previous permits (if any) remain in effect, unless the tests have been satisfactorily completed. Compliance test requirements may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions. (20.2.72 NMAC Sections 210.C and 213)

(2) Compliance tests shall be conducted within sixty (60) days after the unit(s) achieve the maximum normal production rate. If the maximum normal production rate does not occur within one hundred twenty (120) days of source startup, then the tests must be conducted no later than one hundred eighty (180) days after initial startup of the source.

(3) Unless otherwise indicated by Specific Conditions or regulatory requirements, the default time period for each test run shall be at least 60 minutes and each performance test shall consist of three separate runs using the applicable test method. For the purpose of determining compliance with an applicable emission limit, the arithmetic mean of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Department approval, be determined using the arithmetic mean of the results of the two other runs.

(4) Testing of emissions shall be conducted with the emissions unit operating at 90 to 100 percent of the maximum operating rate allowed by the permit. If it is not possible to test at that rate, the source may test at a lower operating rate, subject to the approval of the Department.

(5) Testing performed at less than 90 percent of permitted capacity will limit emission unit operation to 110 percent of the tested capacity until a new test is conducted.

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(6) If conditions change such that unit operation above 110 percent of tested capacity is possible, the source must submit a protocol to the Department within 30 days of such change to conduct a new emissions test.

#### B. EPA Reference Method Tests

(1) All compliance tests required by this permit, unless otherwise specified by Specific Conditions of this permit, shall be conducted in accordance with the requirements of CFR Title 40, Part 60, Subpart A, General Provisions, and the following EPA Reference Methods as specified by CFR Title 40, Part 60, Appendix A:

(a) Methods 1 through 4 for stack gas flow rate

(b) Method 5 for TSP

(c) Method 6C and 19 for SO<sub>2</sub>

(d) Method 7E for NO<sub>x</sub> (test results shall be expressed as nitrogen dioxide (NO<sub>x</sub>) using a molecular weight of 46 lb/lb-mol in all calculations (each ppm of NO/NO<sub>x</sub> is equivalent to  $1.194 \times 10^{-7}$  lb/SCF))

(e) Method 9 for opacity

(f) Method 10 for CO

(g) Method 19 may be used in lieu of Methods 1-4 for stack gas flow rate upon approval of the Department. A justification for this proposal must be provided along with a contemporaneous fuel gas analysis (preferably on the day of the test) and a recent fuel flow meter calibration certificate (within the most recent quarter).

(h) Method 7E or 20 for Turbines per 60.335 or 60.4400

(i) Method 22 for Visible Emissions

(j) Method 201A for filterable PM<sub>10</sub> and PM<sub>2.5</sub>

(k) Method 202 for condensable PM

(l) Method 320 for organic Hazardous Air Pollutants (HAPs)

(m) Method 25A for VOC reduction efficiency

(n) ASTM D6348-03 may be used for RICE only

(2) Alternative test method(s) may be used if the Department approves the change

#### C. Periodic Monitoring and Portable Analyzer Requirements

(1) Periodic emissions tests (periodic monitoring) may be conducted in accordance with EPA Reference Methods or by utilizing a portable analyzer. Periodic monitoring utilizing a portable analyzer shall be conducted in accordance with the requirements of the current version of ASTM D 6522. However, if a facility has

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met a previously approved Department criterion for portable analyzers, the analyzer may be operated in accordance with that criterion until it is replaced.

(2) Unless otherwise indicated by Specific Conditions or regulatory requirements, the default time period for each test run shall be at least 20 minutes.

Each performance test shall consist of three separate runs. The arithmetic mean of results of the three runs shall be used to determine compliance with the applicable

emission limit.

(3) Testing of emissions shall be conducted in accordance with the requirements at Section B108.E.

(4) During emissions tests, pollutant and diluent concentration shall be monitored and recorded. Fuel flow rate shall be monitored and recorded if stack gas flow rate is determined utilizing Method 19. This information shall be included with the test report furnished to the Department.

(5) Stack gas flow rate shall be calculated in accordance with 40 CFR 60, Appendix A, Method 19 utilizing fuel flow rate (scf) determined by a dedicated fuel flow meter and fuel heating value (Btu/scf) determined from a fuel sample obtained preferably during the day of the test, but no earlier than three months prior to the test date. Alternatively, stack gas flow rate may be determined by using EPA Methods 1-4.

#### D. Test Procedures:

(1) The permittee shall notify the Program Manager of the Air Quality Bureau's Compliance and Enforcement Section consistent with the Section's current published reporting procedures.

(2) Equipment shall be tested in the "as found" condition. Equipment may not be adjusted or tuned prior to any test for the purpose of lowering emissions, and then returned to previous settings or operating conditions after the test is complete.

(3) Contents of test notifications, protocols and test reports shall conform to the format specified by the Department's Universal Test Notification, Protocol and Report Form and Instructions. Current forms and instructions are posted to NMED's Air Quality web site under Compliance and Enforcement Testing.

(4) The permittee shall provide (a) sampling ports adequate for the test methods applicable to the facility, (b) safe sampling platforms, (c) safe access to sampling platforms and (d) utilities for sampling and testing equipment.

(5) The stack shall be of sufficient height and diameter and the sample ports shall be located so that a representative test of the emissions can be performed in accordance with the requirements of EPA Method 1 or ASTM D 6522-00 as applicable.

(6) Where necessary to prevent cyclonic flow in the stack, flow straighteners shall be installed.

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(7) Unless otherwise indicated by Specific Conditions or regulatory requirements, test reports shall be submitted to the Department no later than 30 days after completion of the test.

#### B112 Compliance

A. The Department has the right to enter the facility at all reasonable times to verify the terms and conditions of this permit. Required records shall be organized by date and subject matter and shall at all times be readily available for inspection. The permittee, upon verbal or written request from an authorized representative of the Department who appears at the facility, shall immediately produce for inspection or copying any records required to be maintained at the facility. Upon written request at other times, the permittee shall deliver to the Department paper or electronic copies of any and all required records maintained on site or at an off-site location. Requested records shall be copied and delivered at the permittee's expense within three business days from receipt of request unless the Department allows additional time. Required records may include records required by permit and other information necessary to demonstrate compliance with terms and conditions of this permit. (NMSA 1978, Section 74-2-13)

B. A copy of the most recent air quality permit and Registration Form issued by the Department shall be kept at the permitted facility or (for unstaffed sites) at the nearest company office and shall be made available to Department personnel for inspection upon request. (20.2.72.210.B.4 NMAC)

#### B113 Permit Cancellation and Revocation

A. The Department may revoke this permit if the applicant or permittee has knowingly and willfully misrepresented a material fact in the Registration Form. Revocation will be made in writing, and an administrative appeal may be taken to the Secretary of the Department within thirty (30) days. Appeals will be handled in accordance with the Department's Adjudicatory Procedures, 20.1.5 NMAC.

B. The Department shall automatically cancel any permit for any source which ceases operation for five (5) years or more, or permanently. Reactivation of any source after the five (5) year period shall require a new permit. (20.2.72 NMAC)

C. The Department may cancel a permit if the construction or modification is not commenced within two (2) years from the date of issuance or if, during the construction or modification, work is suspended for a total of one (1) year. (20.2.72 NMAC)

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#### B114 Notification to Subsequent Owners

A. The permit and conditions apply in the event of any change in control or ownership of the Facility. No permit modification is required in such case. However, in the event of any such change in control or ownership, the permittee shall notify the succeeding owner of the permit and conditions and shall notify the Bureau's Program Manager, Permits Section of the change in ownership within fifteen (15) days of that change. (20.2.72.212.C NMAC)

B. Any new owner or operator shall notify the Program Manager of the Air Quality Bureau's, Permits Section, within thirty (30) days of assuming ownership, the date of assuming ownership, and the new owner's or operator's name and address. (20.2.73.200.E.3 NMAC)

#### B115 Asbestos Demolition

A. Before any asbestos demolition or renovation work, the permittee shall determine whether 40 CFR 61 Subpart M, National Emissions Standards for Asbestos applies. If required, the permittee shall notify the Program Manager of the Air Quality Bureau's Compliance and Enforcement Section using forms furnished by the Department.

#### B116 Short Term Engine Replacement

A. The following Alternative Operating Scenario (AOS) addresses engine breakdown or periodic maintenance and repair, which requires the use of a short-term replacement engine. The following requirements do not apply to engines that are exempt per 20.2.72.202.B(3) NMAC. Changes to exempt engines must be reported in accordance with 20.2.72.202.B NMAC. A short-term replacement engine may be substituted for any engine specified in the Registration Form for no more than 120 days in any monthly rolling twelve month period per permitted engine. The compliance demonstrations required as part of this AOS are in addition to any other compliance demonstrations required by this permit. If the engine will remain onsite for longer than 120 days, a Registration Form shall be submitted and approved by the Department prior to the expiration of the 120 day period authorized by this condition.

(1) The permittee may temporarily replace an existing engine that is subject to the emission limits established in the Registration Form with another engine regardless of manufacturer, model, and horsepower without modifying the Registration Form. The permittee shall submit written notification to the Department within 15 days of the date of engine substitution according to condition B110.C(1).

(a) The potential emission rates of the replacement engine shall be determined using the replacement engine's manufacturer specifications and shall comply with the permitted emission limits of the engine being replaced as specified in the Registration Form.

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(b) The direction of the exhaust stack for the replacement engine shall be either vertical or the same direction as for the existing engine. The replacement engine's stack height and flow parameters shall be at least as effective in the dispersion of air pollutants as the modeled stack height and flow parameters for the existing permitted engine. The following equation may be used to show that the replacement engine disperses pollutants as well as the existing engine. The value calculated for

the replacement engine on the right side of the equation shall be equal to or greater than the value for the existing engine on the left side of the equation. The permitting page of the Air Quality Bureau website contains a spreadsheet that performs this calculation.

#### EXISTING ENGINE REPLACEMENT ENGINE

$$[(g) \times (h1)] + [(v1)^2/2] + [(c) \times (T1)] \leq [(g) \times (h2)] + [(v2)^2/2] + [(c) \times (T2)] \quad q1 \geq q2$$

Where

g = gravitational constant = 32.2 ft/sec<sup>2</sup>

h1 = existing stack height, feet

v1 = exhaust velocity, existing engine, feet per second

c = specific heat of exhaust, 0.28 BTU/lb-degree F

T1 = absolute temperature of exhaust, existing engine = degree F + 460

q1 = permitted allowable emission rate, existing engine, lbs/hour

h2 = replacement stack height, feet

v2 = exhaust velocity, replacement engine, feet per second

T2 = absolute temperature of exhaust, replacement engine = degree F + 460

q2 = manufacturer's potential emission rate, replacement engine, lbs/hour

The permittee shall keep records showing that the replacement engine is at least as effective in the dispersion of air pollutants as the existing engine.

(c) Test measurement of NO<sub>x</sub> and CO emissions from the temporary replacement engine shall be performed in accordance with Section B111 with the exception of Condition B111A(2) and B111B for EPA Reference Methods Tests or Section B111C for portable analyzer test measurements. Compliance test(s) shall be conducted within fifteen (15) days after the unit begins operation, and records of the results shall be kept according to section B109.B.

i. These compliance tests are not required for an engine certified under 40CFR60, subparts IIII, or JJJJ, or 40CFR63, subpart ZZZZ if the permittee demonstrates that one of these requirements causes such engine to comply with all emission limits of the Registration Form. The permittee shall submit this demonstration to the Department within 48

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hours of placing the new unit into operation. This submittal shall include documentation that the engine is certified, that the engine is within its useful life, as defined and specified in the applicable requirement, and shall include calculations showing that the applicable emissions standards result in compliance with the emission limits.

ii. These compliance tests are not required if a test was conducted by portable analyzer or by EPA Method test (including any required by 40CFR60, subparts IIII and JJJJ and 40CFR63, subpart ZZZZ) within the last 12 months. These previous tests are valid only if conducted at the same or lower elevation as the existing engine location prior to commencing operation as a temporary replacement. A copy of the test results shall be kept according to section B109.B.

(d) Compliance tests for NO<sub>x</sub> and CO shall be conducted if requested by the Department in writing to determine whether the replacement engine is in compliance with applicable regulations or permit conditions.

(e) Upon determining that emissions data developed according to B116.A.1(c) fail to indicate compliance with either the NO<sub>x</sub> or CO emission limits, the permittee shall notify the Department within 48 hours. Also within that time, the permittee shall implement one of the following corrective actions:

i. The engine shall be adjusted to reduce NO<sub>x</sub> and CO emissions and tested per

B116.A.1(c) to demonstrate compliance with the emission limits.

ii. The engine shall discontinue operation or be replaced with a different unit.

(2) Short term replacement engines, whether of the same manufacturer, model, and horsepower, or of a different manufacturer, model, or horsepower, are subject to all federal and state applicable requirements, regardless of whether they are set forth in this permit (including monitoring and recordkeeping), and shall be subject to any shield afforded by this permit.

(3) The permittee shall maintain a contemporaneous record documenting the unit number, manufacturer, model number, horsepower, emission factors, emission test results, and serial number of any existing engine that is replaced, and the replacement engine. Additionally, the record shall document the replacement duration in days, and the beginning and end dates of the short-term engine replacement.

(4) The permittee shall maintain records of a regulatory applicability determination for each replacement engine (including 40CFR60, subparts IIII and JJJJ and 40CFR63, subpart ZZZZ) and shall comply with all associated regulatory requirements.

B. All records required by this section shall be kept according to section B109.

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## PART C REGISTRATION PROCEDURE

### C100 Registration Forms

#### A. General Requirements

(1) The owner or operator of a Facility to be registered under GCP-Oil and Gas shall complete the following steps. All submittals shall be made on the current Registration Form provided by the Department. The owner or operator shall:

(a) Complete the public notice requirements as required in C100.B. Public notice is required for new facilities, and existing, constructed facilities that are registering under Part 72 for the first time.

(b) At a minimum, complete the following sections of the GCP-Oil and Gas Registration Form:

(i) Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10. This includes the AECT.

(c) Submit a complete GCP-Oil and Gas Registration Form, including proof of Public Notice and a payment of 10 fee points as required by 20.2.75 NMAC, to the Department.

(2) Within thirty (30) calendar days of receiving a Registration Form for the GCP-Oil and Gas, the Department shall review the Registration Form and shall approve or deny the registration. The Department may not grant approval of a Registration Form until fifteen (15) days after Public Notice has been published and posted. Approval or denial, once effective, of a Registration Form is a determination by the Department of whether or not the source qualifies to register for coverage under GCP-Oil and Gas. The Department shall notify the owner or operator of its decision by certified mail.

#### B. Public Notification

(1) The applicant's public notice requirements shall be completed and submitted as part of the Registration Form.

(2) In accordance with 20.2.72.220.A(2)(b)ii NMAC, the applicant's public notice requirements include:

(a) a notice published once in the legal notices section of a newspaper in general circulation in the county or counties in which the Facility is proposed to be constructed or operated is located. The applicant's legal notice may include up to ten (10) separate facilities if required location information for each facility is included in the notice; and

(b) a notice posted at the proposed or existing Facility entrance in a publicly accessible and conspicuous place on the property on which the Facility is, or is proposed to be, located, until the general permit registration is granted or denied.



(3) In accordance with 20.2.72.220.C(2) NMAC, the Department shall not grant the registration until at least fifteen (15) days after the date the applicant's public notice was initiated.

#### C101 Revision Processes

##### A. Administrative Changes that Require Notification

(1) Owners or operators shall, at a minimum, submit Sections 1 and 10 of the Registration Form to the Department for the following change(s). The notification shall include all information required by the Department to review the request and shall be submitted within fifteen (15) calendar days of the change(s):

- (a) Change of owner/operator,
  - (b) Adding exempt equipment,
  - (c) Correcting a typographical error, or
  - (d) Change of contact information for any person identified in the Registration Form.
- (2) No public notification is required.
- (3) No permit fees under 20.2.75 NMAC apply.

##### B. Modifications that Require Notification

(1) Prior to any modification of a source, the owner or operator shall, at a minimum, submit Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, and the AECT of the Registration Form to the Department.

(2) No construction of a modification shall begin prior to receiving written approval by the Department.

(3) Types of modifications that require notification include construction of any new regulated equipment, changes in the method of operation, or any other physical changes which modifies any requested allowable hourly or annual emission limit.

(4) The owner or operator shall maintain the current Registration Form on-site or at the permittee's local business office.

(5) The revised Registration Form, including the lb/hr and tpy emission limits of new or altered emissions units, becomes part of the registration and is enforceable.

(6) No public notification is required.

(7) General Construction Permit fees under 20.2.75 NMAC do apply. A fee of 10 fee points is required to be submitted with the Registration Form. The current value of a fee point can be found on the Department's Permitting website.

##### C. Changes that Prevent Meeting General Permit Limits

(1) Changes or equipment additions that prevent the Facility from meeting the requirements of GCP-Oil and Gas shall not occur before the owner or operator applies for and is issued an individual construction permit under 20.2.72.200 NMAC.  
[20.2.72.220.D(2) NMAC]

#### PART D MISCELLANEOUS: SUPPORTING ON-LINE DOCUMENTS; DEFINITIONS; ACRONYMS

##### D100 Supporting On-Line Documents

A. Copies of the following documents can be downloaded from NMED's website under Compliance and Enforcement or requested from the Bureau:

- 1) Excess Emission Form (for reporting deviations and emergencies)
- 2) Universal Stack Test Notification, Protocol and Report Form and Instructions
- 3) SOP for Use of Portable Analyzers in Performance Tests

## D101 Definitions

- A. "Enclosed Combustion Device" means a direct, enclosed, ground level combustion device.
- B. "Flare" means a direct combustion device in which air and all combustible gases react at the burner with the objective of complete and instantaneous oxidation of the combustible gases.
- C. "Malfunction" means any sudden and unavoidable failure of air pollution control equipment or process equipment beyond the control of the owner or operator, including malfunction during startup or shutdown. A failure that is caused entirely or in part by poor maintenance, careless operation, or any other preventable equipment breakdown shall not be considered a malfunction. (20.2.7 NMAC)
- D. "Monthly Rolling" is a concept of incorporating the most recent month's emission s data into a 12-month period. To determine the current monthly rolling total (or average), subtract the oldest month's data from the calculation and add the current (most recent) month's data and perform the required calculation.
- E. "Natural Gas Liquids" means the hydrocarbons, such as ethane, propane, butane, and pentane that are extracted from field gas. (40 CFR 60.631)
- F. "National Ambient Air Quality Standards" means, unless otherwise modified, the primary (health-related) and secondary (welfare-based) federal ambient air quality standards promulgated by the US EPA pursuant to Section 109 of the Federal Act.

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- G. "NOx" or "Nitrogen dioxide" means the chemical compound containing one atom of nitrogen and two atoms of oxygen, for the purposes of ambient determinations. The term "nitrogen dioxide," for the purposes of stack emissions monitoring, shall include nitrogen dioxide (the chemical compound containing one atom of nitrogen and two atoms of oxygen), nitric oxide (the chemical compound containing one atom of nitrogen and one atom of oxygen), and other oxides of nitrogen which may test as nitrogen dioxide and is sometimes referred to as NOx or NOx. (20.2.2 NMAC)
- H. "Potential Emission Rate" or "PER" means the emission rate of a source at its maximum capacity to emit a regulated air contaminant under its physical and operational design, provided any physical or operational limitation on the capacity of the source to emit a regulated air contaminant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its physical and operational design only if the limitation or the effect it would have on emissions is enforceable by the department pursuant to the Air Quality Control Act or the federal Act.
- I. "Produced Water" means water that is extracted from the earth from an oil or natural gas production well, or that is separated from crude oil, condensate, or natural gas after extraction.
- J. "Property Boundary" means the outside edge of the property, which includes all the equipment, registered under this Permit. The property may consist of one or more continuous and adjacent properties if they are owned, leased, or under direct control of the owner or operator.
- K. "SSM", for requirements under 20.2.7 NMAC, means routine or predictable startup, shutdown, or scheduled maintenance.
- L. "Shutdown", for requirements under 20.2.7 NMAC, means the cessation of operation of any air pollution control equipment or process equipment.
- M. "Startup", for requirements under 20.2.7 NMAC, means the setting into operation of any air pollution control equipment or process equipment.
- N. "Storage Vessel" means a tank or other vessel that contains an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water, and that is constructed primarily of nonearthen materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support.
- O. "Thermal Oxidizer" means a combustion device that eliminates VOC, CO, and volatile HAP emissions by combusting them to carbon dioxide (CO<sub>2</sub>) and water. The device

maintains a minimum temperature in the combustion chamber to eliminate pollutants.

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P. "Vapor Recovery Unit (VRU)" means a unit capable of collecting hydrocarbon vapors and gases and routing such hydrocarbon vapors and gases back into the process or to a sales pipeline.

D102 Acronyms

2SLB

..... 2-stroke lean burn

4SLB

..... 4-stroke lean burn

4SRB

.....4-stroke rich burn

acfm

..... actual cubic feet per minute

AFR

.....air fuel ratio

AP-42

.....EPA

Air Pollutant Emission Factors

AQB

.....Air Quality Bureau

AQCR

..... Air Quality Control Region

ASTM

.....American Society for

Testing and Materials

BTU

.....British ThermalUnit

CAA

.....Clean Air Act of 1970

and 1990 Amendments

CEM

..... continuous emissions monitoring

cfh

..... cubic feet per hour

cfm

.....cubic feet per minute

CFR

..... Code of Federal Regulation

CI

.....compression ignition

CO

..... carbon monoxides

COMS

..... continuous

opacity monitoring system

EIB

..... Environmental Improvement Board

EPA..... United States  
Environmental Protection Agency

gr./100 cf .....  
grains per one hundred cubic feet

gr./dscf .....grains per  
dry standard cubic foot

GRI.....  
.....Gas Research Institute

HAP.....  
.....hazardous air pollutant

hp .....  
.....horsepower

H2S.....  
.....hydrogen sulfide

IC .....  
.....internal combustion

KW/hr .....  
..... kilowatts per hour

lb/hr.....  
.....pounds per hour

lb/MMBtu .....pounds per  
million British Thermal Unit

MACT .....Maximum Achievable  
Control Technology

MMcf/hr.....  
.....million cubic feet per hour

MMscf.....  
.....million standard cubic feet

N/A.....  
..... not applicable

NAAQS.....National Ambient  
Air Quality Standards

NESHAP .....National Emission Standards for Hazardous Air  
Pollutants

NG .....  
..... natural gas

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NGL .....  
..... natural gas liquids

NMAAQs .....New Mexico Ambient Air  
Quality Standards

NMAC..... New  
Mexico Administrative Code

NMED.....New Mexico  
Environment Department

NMSA.....Ne  
w Mexico Statues Annotated

NOx.....  
.....nitrogen oxides

NSCR.....no  
n-selective catalytic reduction

NSPS.....New  
Source Performance Standard

NSR.....  
.....New Source Review

PEM  
.....param  
etric emissions monitoring

PM..... particulate matter (equivalent to TSP, total  
suspended particulate)

PM10 .....particulate matter 10  
microns and less in diameter

PM2.5 .....particulate matter 2.5  
microns and less in diameter

pph.....  
.....pounds per hour

ppmv  
.....  
.. parts per million by volume

PSD .....Prevention  
of Significant Deterioration

RATA.....Relative  
Accuracy Test Assessment

RICE .....reciprocating  
internal combustion engine

rpm.....  
..... revolutions per minute

scfm.....  
.... standard cubic feet per minute

SI  
.....  
..... spark ignition

SO2  
.....  
..... sulfur dioxide

SSM.....Startup Shutdown Maintenance (see  
SSM definition)

TAP.....  
..... Toxic Air Pollutant

TBD.....  
.....to be determined

THC.....  
.....total hydrocarbons

TSP.....  
.....Total Suspended Particulates

tpy

.....  
.....tons per year

ULPS.....  
..... ultra low pressure separator

ULSD.....  
.....ultra low sulfur diesel

USEPA..... United States Environmental  
Protection Agency

UTM.....Universal Transverse Mercator  
Coordinate system

UTMH.....Universal  
Transverse Mercator Horizontal

UTMV.....Universal  
Transverse Mercator Vertical

VHAP.....  
volatile hazardous air pollutant

VOC.....  
..... volatile organic compounds

VRT.....  
..... vapor recovery tower

VRU.....  
..... vapor recovery unit